

REMARKS

By this Amendment, claims 10-16 and 20-25 have been cancelled without prejudice or disclaimer, claim 5 has been amended to correct a typographical error, and claims 26-38 have been added merely to further recite the claimed subject matter without narrowing the scope of any of the claims. Applicants have amended the currently pending claims in order to expedite prosecution and do not, by this amendment, intend to abandon subject matter of the claims as originally filed or later presented. Moreover, Applicants reserve the right to pursue such subject matter in a continuing application. No new matter has been added. New claims 26-38 find support in the application, including pages 12-19 of the specification and Figures 1-7. Each of the new dependent claims 26-30 depend, directly or indirectly, from pending independent claim 1 and each of the new independent claims 31-38 recite a wicking surface area of a wall defining the discharge space that is configured to transport a liquid towards the discharge space from a liquid reservoir in contact with the wicking surface area as similarly recited in claims 1 and 17. Claims 1-9, 17-19 and 26-38 are pending in this patent application. Reconsideration of the rejections in view of the remarks below is requested.

The Office Action rejected claims 1-9 and 17-19 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,499,282 to Silfvast ("Silfvast"). Applicants respectfully traverse the rejection, without prejudice.

Silfvast discloses a lithium heat pipe discharge source 700. The lithium pipe discharge source is used if it is desirable to keep the silicon or beryllium window 704 at a cool temperature relative to the hot temperature required for the lithium discharge. In such a configuration, the cool region 702 is filled with helium at the same pressure as that desired for the lithium vapor 716 in the hot region. The liquid lithium 718 is then vaporized by heating the discharge region 708 in SiC bore 710 to a temperature at a desired vapor pressure. The lithium vapor 716 will fill the discharge region and will condense at the end of the discharge region 708 and flow back to the liquid lithium source 718 via the wick material 714 such as stainless steel or nickel. The silicon or beryllium window 704 are of the same thickness as described above for the lithium arc discharge of FIG. 9a. A discharge current is operated through the discharge region 708 from the anode 712 to the cathode 706. (See, Silfvast, col. 10, lines 47-63).

The Office Action asserts that Silfvast discloses all the features of independent claims 1 and 17. However, Applicants' respectfully submit that Silfvast fails to at least disclose,

teach or suggest, among other things, a radiation source comprising a wicking surface area of a wall defining said discharge space is configured to transport a liquid towards said discharge space from a liquid reservoir in contact with said wicking surface area, as recited in independent claims 1 and 17.

As noted above, Silfvast discloses that lithium vapor 716 fills the discharge region, condenses at the end of the discharge region 708, and flows back to the liquid lithium source 718 via the wick material 714. Through this configuration, a window 704 of the discharge source can be kept cool. Thus, Silfvast fails to disclose, teach or suggest a wicking surface area of a wall defining the discharge space that is configured to transport a liquid towards the discharge space from a liquid reservoir in contact with the wicking surface area as recited in independent claims 1 and 17. Indeed, if the wick material of Silfvast were configured to transport liquid towards the discharge region, it would likely have the opposite effect as intended in Silfvast – the discharge region would likely heat to a high temperature and may cause the window 704 to heat, rather than stay cool as intended by Silfvast.

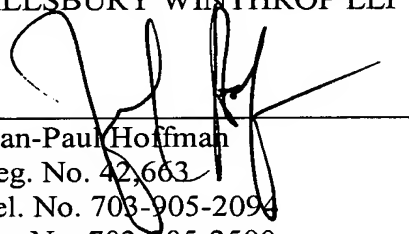
Therefore, for at least the above reasons, Silfvast fails to disclose, teach or suggest all the features recited by independent claims 1 and 17. Claims 2-9 depend from claim 1 and are, therefore, patentable for at least the same reasons provided above related to claim 1 and for the additional features recited therein. Claims 18-19 depend from claim 17 and are, therefore, patentable for at least the same reasons provided above related to claim 17 and for the additional features recited therein. As a result, Applicants respectfully submit that the rejection under 35 U.S.C. §102 should be withdrawn and the claims allowed.

Further, Applicants respectfully submit that new dependent claims 26-30 are patentable over Silfvast at least because Silfvast fails to disclose, teach or suggest a wicking surface area of a wall defining a discharge space that is configured to transport a liquid towards the discharge space from a liquid reservoir in contact with the wicking surface area as recited in independent claim 1 from which claims 26-30 depend, as well as fails to disclose, teach or suggest the additional features recited in each of those dependent claims. Applicants also respectfully submit that new independent claims 31-38 are patentable over Silfvast at least because Silfvast fails to disclose, teach or suggest a wicking surface area of a wall defining a discharge space that is configured to transport a liquid towards the discharge space from a liquid reservoir in contact with the wicking surface area as recited in each of the independent claims 31-38.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance. If questions relating to patentability remain, the Examiner is invited to contact the undersigned to discuss them.

Should any fees be due, please charge them to our deposit account no. 03-3975, under our order no. 081468/0306169. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced deposit account.

Respectfully submitted,  
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